Name: _____ **Date:** _____

Perpendicular Lines Practice

Part One: Negative Reciprocal Practice: Write the negative reciprocal of each slope. (Remember: Change the sign and flip the fraction.)

1. m = $\frac{-3}{4}$ neg rec: _____	2. m = $\frac{1}{8}$ neg rec: _____	3. m = -1 neg rec: _____	4. m = $\frac{-9}{10}$ neg rec: _____
5. m = 5 neg rec: _____	6. m = 1 neg rec: _____	7. m = $\frac{1}{6}$ neg rec: _____	8. m = -100 neg rec: _____

Part Two: Writing Equations of Perpendicular Lines: Write the equation of the line in slope-intercept form that is perpendicular to the given line and passes through the given coordinate.

9. perp to y = $\frac{-3}{4}$ x - 12; through (9, 1) Step 1: Take the negative reciprocal of the slope of the given line. m = _____ Step 2: Use the given point. Substitute m, x and y into **y = mx + b** and solve for b. b = _____ Step 3: Fill in the equation. y = _____x _____	10. perp to y = -x + 2; through (2, 11) Step 1: Take the negative reciprocal of the slope of the given line. m = _____ Step 2: Use the given point. Substitute m, x and y into **y = mx + b** and solve for b. b = _____ Step 3: Fill in the equation. y = _____x _____

11. perp to y = $\frac{1}{6}$x + 1; through (-1, 1)

Step 1: Take the negative reciprocal of the slope of the given line.

m = _____

Step 2: Use the given point. Substitute m, x and y into **y = mx + b** and solve for b.

b = _____

Step 3: Fill in the equation.

y = _____x _____

12. perp to y = -100x + 2; through (500,0)

Step 1: Take the negative reciprocal of the slope of the given line.

m = _____

Step 2: Use the given point. Substitute m, x and y into **y = mx + b** and solve for b.

b = _____

Step 3: Fill in the equation.

y = _____x _____

Part Three: Review Concepts

13. Find the slope of the line between the points (-1, 8) and (12, 6).

14. Find the rate of change illustrated by the table.

# of Weeks	0	1	3	7
Weight of Pump-kin	5	8	14	26